

1. A pump for pumping liquid comprising: a pump housing having opposing first and second end regions, a longitudinal axis and a plurality of ribs extending inwardly and located near the first end region, and defining a chamber;  
an inlet in said pump housing at said first end region;  
an outlet in said pump housing at said second end region;  
a motor housing extending into said chamber defined by said pump housing;  
a motor located in said motor housing;  
an impeller assembly operatively coupled to said motor for pumping liquid which enters said chamber through said inlet; and  
an impeller assembly operatively coupled to said motor for pumping liquid which enters said chamber through said inlet; and said pump housing, said motor housing and said impeller assembly together forming a liquid passageway from said inlet to said outlet, *said outlet being oriented relative to the liquid passageway so that the liquid being pumped passes through the outlet substantially tangentially relative to the longitudinal axis of the pump housing.*

Claim 1, Col. 8, L. 54-Col. 9, L. 7.

Shurflo argues that in reviewing the terms of Claim 1 in connection with the specifications and preferred embodiments, it is clear that the patentee intended for the liquid being pumped through the pump to pass through an outlet on the side of the housing (i.e. perpendicular to the pump housing). Shurflo contends that each of the figures in the '437 patent depict a perpendicular outlet essentially identical to the livewell pumps at issue in this case. Plntf's Br. At 3. Thus, the term cannot be read in strict mathematical terms, as doing so would exclude all of the preferred embodiments. Shurflo proposes the following construction:

the outlet being oriented substantially tangent to the liquid passageway so that the liquid being pumped passes through the outlet moving away from the longitudinal axis of the pump housing.

ITT contends "substantially tangentially" has a plain and ordinary meaning, and since that phrase is not otherwise defined in the patent, the plain meaning should apply. ITT argues that the plain meaning of "tangentially" is "aligned with the axis." Resp. Br. At 1. Therefore, using the plain meaning of "substantially tangentially," ITT contends the liquid being pumped through the pump must pass through an outlet extending upward from the pump housing and directly toward or away from an end of the pump. ITT proposes the following construction:

said outlet being oriented relative to the liquid passageway so that the liquid exits the pump through the outlet that extends upward from the longitudinal axis of the pump housing.

ITT argues that Shurflo ignores the claim language in favor of the specification. It is true that the claims of a patent are what define the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312

(Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). However, the “claims ‘must be read in view of the specification, of which they are a part.’” *Phillips*, 415 F.3d at 1312–15 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002).

The heart of the parties' dispute regards what the patentee intended by describing the outlet direction as tangential to the longitudinal access. Claim 1 and claim 11 (which depends from 1) recite three different orientations with respect to the claimed longitudinal axis: tangential, parallel, and perpendicular. Claim 1 requires "said outlet being oriented relative to the liquid passageway so that the liquid being pumped passes through the outlet substantially tangentially relative to the longitudinal axis of the pump housing." '437, claim 1. The patentee uses both “parallel” and “perpendicular” orientations in claim 11:

The pump of claim 1 which further comprises a dual inlet assembly secured to said pump housing, said pump housing having a longitudinal axis, said dual inlet assembly having a first port oriented ***parallel*** to the longitudinal axis so that liquid from said first port passes through said inlet and a second port oriented ***perpendicular*** to the longitudinal axis so that liquid from said second port passes through said inlet.”

Col. 9, L.64-Col. 10, L. 4. Clearly, the patentee understands the difference between the words “parallel,” “perpendicular,” and “tangentially.” Figures 2 and 4 in the patent are helpful in evaluating the particular meaning for these three orientations.

Both claim 11 and the specification refer to port 104 as parallel to the longitudinal axis 266. '437, 8:34-36 ("[d]ual inlet assembly 102 allows liquid to be passed through inlet opening 252 from a port 104 parallel to the longitudinal axis 266 of pump housing 212;" *see also*, Fig. 4). Both claim 11 and the specification refer to port 106 as perpendicular to the longitudinal axis 266. *Id.* at 8:35-38 ("Port 106, which is perpendicular to longitudinal axis 266, is used for the inlet of a washdown pump (not shown) which is used periodically, when needed."). Finally, in describing the outlet port (54 in figure 2 and 254 in figure 4), the specification states that "opening 54 is situated so that the pumped liquid in liquid passageway 60 leaves or exits liquid passageway 60 substantially tangentially to the longitudinal axis 66 of the pump housing 12. This provides reduced resistance to the pumped fluid leaving the liquid passageway 60 and enhances pump efficiency." '437, 4:55-60.

In view of this guidance from the specification and claims, the Court finds that the parallel and perpendicular orientations are easily ascertained with respect to the two dimensional aspects of figure 4. The patentee used the term parallel to refer to a line or direction that is the same as the direction as the longitudinal axis. Further, the patentee used the term perpendicular to refer to a line or direction that is rotated 90 degrees from the direction of the longitudinal axis. However, when referring to the tangential orientation of opening 54 (or 254), the third dimension of figure 2 and figure 4—represented by the dotted-line nature of item 52 (or 254)—is important to note.

Obviously, port 54 (or 254) was not intended as literally depicted - a hole in the pump motor 20. Rather, the dotted line indicates that the opening extends from the fluid passage, back behind the pump motor in a direction that is generally tangential to an imaginary circle centered at the longitudinal access. In other words, if the longitudinal axis were a longitudinal cylinder, the opening

54 (or 254) would be generally tangential to an arc of that cylinder. For example, as shown in figures 2 and 4, the opening 54 (or 254) appears generally tangential to an arch formed by the outer surface of the cylindrical motor housing 18. Thus, the claim words "substantially tangentially relative to the longitudinal axis" are generally referring to a tangent of any arc of any cylinder centered on the horizontal axis. The Court finds that a line or direction is substantially tangential to the longitudinal axis if that line or direction is: on one side of the longitudinal axis (thus a tangent to a axis-centered cylinder, where the cylinder has a positive radius of any value); and is not directly toward or away from the claimed end region of the pump (which would be parallel to the longitudinal axis).

Neither the patent's embodiments nor the claim words can support ITT's suggestion that the outlet must guide the fluid "upward from the longitudinal axis of the pump housing." ITT's proposed construction would require the pump outlet to guide fluid in a direction that is at least generally parallel to the claimed longitudinal axis. The claimed tangential direction is not parallel and not even necessarily generally parallel to the longitudinal axis. Further, Shurflo's proposal would include a strictly perpendicular orientation with respect to the longitudinal axis. As the Court indicated above, in order to be substantially tangential to the longitudinal axis, the fluid direction must be substantially on one side of the axis (i.e. a simple line perpendicular to the axis line is not a tangent to the axis). In addition, Shurflo's proposal does not resolve the dispute between the parties because it leaves the disputed word "tangent" within the construction.

Based on the Court's review of the claim language, the specification, and the parties' arguments, the Court construes the term "said outlet being oriented relative to the liquid passageway

so that the liquid being pumped passes through the outlet substantially tangentially relative to the longitudinal axis of the pump housing" as follows: "the outlet is designed and positioned so that liquid passing through the outlet is moving in a direction that is both (i) substantially on one side of the longitudinal axis; and (ii) not directly toward or away from either end region of the pump housing."

**So ORDERED and SIGNED this 20th day of September, 2010.**

A handwritten signature in black ink, appearing to read 'Leonard Davis', written over a horizontal line.

**LEONARD DAVIS  
UNITED STATES DISTRICT JUDGE**